CLAIMS

We claim:

1. A method of treating a viral infection comprising administering to a mammal with a viral infection causing liver inflammation a therapeutically effective amount of a polypeptide comprising an amino acid sequence that has at least 95% identity to SEQ ID NO:2 from amino acid residue 22 to residue 205, wherein after administration of the polypeptide the viral infection level or the liver inflammation is reduced.

2. The method of claim 1, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:18 from residue 1 to residue 175.

3. The method of claim 1, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO: 24 or SEQ ID NO:26.

4. The method of claim 1, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:28 or SEQ ID NO:30.

5. The method of claim 1, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:36.

6. The method of claim 1, wherein the polypeptide is conjugated to a polyalkyl oxide moiety.

7. The method of claim 1, wherein reduction in the viral infection level is measured as a decrease in viral load, an increase in antiviral antibodies, a decrease in serological levels of alanine aminotransferase or histological improvement.

8. The method of claim 1, wherein the mammal is a human.

9. The method of claim 1, wherein the viral infection is a hepatitis B virus or hepatitis C virus infection or a hepatitis B virus infection.

10. A method of treating a viral infection comprising administering to a mammal with a viral infection causing liver inflammation a therapeutically effective amount of a polypeptide comprising an amino acid sequence that has at least 95% identity to SEQ ID

NO:4 from amino residue 20 to residue 200, wherein after administration of the polypeptide the viral infection level or the liver inflammation is reduced.

11. The method of claim 10, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:20 from residue 1 to residue 181.

12. The method of claim 10, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO: 32 or SEQ ID NO:34.

13. The method of claim 10, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:38.

14. The method of claim 10, wherein the polypeptide is conjugated to a polyalkyl oxide moiety.

15. The method of claim 10, wherein reduction in the viral infection level is measured as a decrease in viral load, an increase in antiviral antibodies, a decrease in serological levels of alanine aminotransferase or histological improvement.

16. The method of claim 10, wherein the mammal is a human.

17. The method of claim 10, wherein the viral infection is a hepatitis B virus infection or hepatitis C virus infection.

18. A method of treating liver inflammation comprising administering to a mammal in need thereof a therapeutically effective amount of a polypeptide comprising an amino acid sequence that has at least 95% identity to SEQ ID NO:2 from amino acid residue 22 to residue 205, wherein after administration of the polypeptide the liver inflammation is reduced.

19. The method of claim 18, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:18 from residue 1 to residue 175.

20. The method of claim 18, wherein the polypeptide comprises an amino acid as shown in SEQ ID NO:24 or SEQ ID NO:26.

21. The method of claim 18, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:28 or SEQ ID NO:30.

22. The method of claim 18, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:36.

23. The method of claim 18, wherein the polypeptide is conjugated to a polyalkyl oxide moiety.

24. The method of claim 18, wherein the mammal is human.

25. The method of claim 18, wherein the liver inflammation is associated with a hepatitis B virus infection or a hepatitis C virus infection.

26. A method of treating liver inflammation comprising administering to a mammal in need thereof a therapeutically effective amount of a polypeptide comprising an amino acide sequence that has at least 95% identity to SEQ ID NO:4 from amino acid residue 22 to residue 205, wherein after administration of the polypeptide the liver inflammation is reduced.

27. The method of claim 26, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:20 from residue 1 to residue 181.

28. The method of claim 26, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:32 or SEQ ID NO:34.

29. The method of claim 26, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:38.

30. The method of claim 26, wherein the polypeptide is conjugated to a polyalkyl oxide moiety.

31. The method of claim 26, wherein the mammal is human.

32. The method of claim 26, wherein the liver inflammation is associated with a hepatitis B virus infection or a hepatitis C virus infection.

33. A method of treating a viral infection comprising administering to an immunocompromised mammal with a viral infection a therapeutically effective amount of a polypeptide comprising an amino acid sequence that has at least 95% identity to SEQ ID NO:2 from amino acid residue 22 to residue 205, wherein after administration of the polypeptide the viral infection is reduced.

34. The method of claim 33, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:18 from residue 1 to 175.

35. The method of claim 33, wherein the polypeptide comprises and amino acid sequence as shown in SEQ ID NO:24 or SEQ ID NO:26.

36. The method of claim 33, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:28 or SEQ ID NO:30.

37. The method of claim 33, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:36.

38. The method of claim 33, wherein the polypeptide is conjugated to a polyalkyl oxide moiety.

39. The method of claim 33, wherein reduction in the viral infection is measured as a decrease in viral load, an increase in antiviral antibodies, a decrease in serological levels of alanine aminotransferase or histological improvement.

40. A method of treating a viral infection comprising administering to an immunocompromised mammal with a viral infection a therapeutically effective amount of a polypeptide comprising an amino acid sequence that has at least 95% identity to SEQ ID NO:4 from amino acid residue 20 to residue 200, wherein after administration of the polypeptide the viral infection is reduced.

41. The method of claim 40, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:20 from residue 1 to 181.

42. The method of claim 40, wherein the polypeptide comprises and amino acid sequence as shown in SEQ ID NO:32 or SEQ ID NO:34.

43. The method of claim 40, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:38.

44. The method of claim 40, wherein the polypeptide is conjugated to a polyalkyl oxide moiety.

45. The method of claim 40, wherein reduction in the viral infection is measured as a decrease in viral load, an increase in antiviral antibodies, a decrease in serological levels of alanine aminotransferase or histological improvement.

46. The method of claim 40, wherein the mammal is human.

47. A method of treating liver inflammation comprising administering to an immunocompromised mammal with liver inflammation a therapeutically effective amount of a polypeptide comprising an amino acid sequence that has at least 95% identity to SEQ ID NO:2 from amino acid residue 22 to residue 205, wherein after administration the liver inflammation is reduced.

48. The method of claim 47, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:18 from residue 1 to 175.

49. The method of claim 47, wherein the polypeptide comprises and amino acid sequence as shown in SEQ ID NO:24 or SEQ ID NO:26.

50. The method of claim 47, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:28 or SEQ ID NO:30.

51. The method of claim 47, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:36.

52. The method of claim 47, wherein the polypeptide is conjugated to a polyalkyl oxide moiety.

53. A method of treating liver inflammation comprising administering to an immunocompromised mammal with liver inflammation a therapeutically effective amount of a polypeptide comprising an amino acid sequence that has at least 95% identity to SEQ ID NO:4 from amino acid residue 20 to residue 200, wherein after administration of the polypeptide the liver inflammation is reduced.

54. The method of claim 53, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:20 from residue 1 to 181.

55. The method of claim 53, wherein the polypeptide comprises and amino acid sequence as shown in SEQ ID NO:32 or SEQ ID NO:34.

56. The method of claim 53, wherein the polypeptide comprises an amino acid sequence as shown in SEQ ID NO:38.

57. The method of claim 53, wherein the polypeptide is conjugated to a polyalkyl oxide moiety.

58. The method of claim 47, wherein the mammal has a cytopenia.

59. The method of claim 53, wherein the mammal has cytopenia.

60. The method of claim 58, wherein the cytopenia is selected from the group consisting of leukocyte deficiency, neutropenia, thrombocytopenia, and anemia.

61. The method of claim 59, wherein the cytopenia is selected from the group consisting of leukocyte deficiency, neutropenia, thrombocytopenia and anemia.